

AMENDMENT UNDER 37 CFR § 1.116
Serial No. 09/740,932

REMARKS

A total of 60 claims remain in the present application. The foregoing amendments are presented in response to the Office Action mailed June 29, 2005, wherefore reconsideration of this application is requested.

By way of the above-noted amendments, independent claims 1, 23 and 54 have been amended to more clearly define features of the present invention. Claims 8 and 10 have been amended to ensure proper antecedent support and to reflect the amendments effected in claim 1. Claims 74-85 have been cancelled.

In preparing the above-noted amendments, careful attention was paid to ensure that no new subject matter has been introduced.

Referring now to the text of the Office Action:

- claims 1-34, 36-46, 54-66 and 74-85 stand rejected under 35 U.S.C. § 102(e), as being unpatentable over the teaching of United States Patent Application No. 2002/0196796 (Ambe et al.).

The Examiner's rejection of claims 1-34, 36-46, 54-66 and 74-85 under 35 U.S.C. §102(e), is believed to be traversed by the above-noted claim amendments, and further in view of the following discussion.

Independent claims 1, 23 and 54 have been amended to define that the node comprises a plurality of egress interfaces, each of which comprises a respective plurality of logical network ports, and the traffic is conveyed to selected ones of the egress interfaces. Thus, for example, claim 1 now defines a step of "conveying the data traffic and the respective parameter to selected ones of a plurality of egress interfaces, each egress interface having a respective plurality of logical egress network ports". Similar amendments have been effected in claims 23 and 54. United States Patent Application No. 2002/0196796 (Ambe et al.) does not teach or suggest at least this feature.

More particularly, the Examiner's claim rejections are based on his interpretation of the elements of Ambe et al. as follows:

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- The parameter of the present invention is interpreted as Ambe's "8 bytes of control information [which] are added to the 64 bytes of cell byte data, page 8, paragraph 0118; see also FIG. 11; for example, the Cell Packet Identification (CPID) is provided to the egress manager 76, page 8, paragraph 118";
- The ingress interface of the present invention is interpreted by the Examiner as Ambe's ingress submodule 14a (FIG. 8); and
- The egress interface of the present invention is interpreted by the Examiner "as the combination of the PMMU 70 and egress submodule 16a where PMMU 70 comprises CBM 71 and egress managers (EgM) 76, page 8, paragraph 0117". "one egress manager 76 is assigned to each egress port of egress submodule 16 of EPIC 20, page 17, paragraph 0214; and the egress manager 76 uses the COS manager 133 and the scheduler 134 to provide policy based QOS, page 18, paragraph 0215".

As such, the Examiner has grouped all cell routing and replication functionality to his egress interface. In this respect, it will be noted that:

- "PMMU 70 includes CBM 71, and interfaces between the GBP, CBP and a plurality of egress managers (EgM) 76 of egress submodule 18, with one egress manager 76 being provided for each egress port." [paragraph 117];
- "CBM 71 handles queue management, and is responsible for assigning cell pointers to incoming cells, as well as assigning common packet IDs (CPID) once the packet is fully written into the CBP." [paragraph 0052];
- "CBM 71 ... performs the functions of on-chip FAP (free address pool) management, transfer of cells to CBP 50, packet assembly and notification to the respective egress managers, rerouting of packets to GBP 60 via a global buffer manager, as well as handling packet flow from the GBP 60 to CBP 50. Memory clean up, memory budget management, channel interface, and cell pointer assignment are also functions of CBM 71. With respect to the free address pool, CBM 71 manages the free address pool and assigns free cell

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pointers to incoming cells. The free address pool is also written back by CBM 71, such that the released cell pointers from various egress managers 76 are appropriately cleared." [paragraph 0118];

- "For each data packet 112 received by an ingress submodule 14 of an EPIC 20 of SOC 10, CBM 71 assigns a Pointer Identification (PID); if the packet 112 is admitted to CBP 50, the CBM 71 assigns a CPID, and if the packet 112 is admitted to GBP 60, the CBM 71 assigns a GPID number. At this time, CBM 71 notifies the corresponding egress manager 76 which will handle the packet 112, and passes the PID to the corresponding egress manager 76 through R channel 77. In the case of a unicast packet, only one egress manager 76 would receive the PID. However, if the incoming packet were a multicast or broadcast packet, each egress manager 76 to which the packet is directed will receive the PID." [paragraph 0214].

Furthermore, since Ambe et al. does not teach or suggest that there is more than one PMMU 70, the Examiner's network node includes exactly one egress interface, and has no capability for traffic forwarding or replication independently of that egress interface.

In contrast, the presently claimed invention explicitly includes a plurality of egress interfaces, each of which comprises a respective plurality of logical network ports. Traffic is forwarded to selected ones of the plurality of egress interfaces, and within each egress interface, the traffic is forwarded based on the parameter value. Thus, in the present invention, traffic forwarding and replication functionality is divided; a portion of it is performed in each egress interface, and the remainder is performed upstream of the egress interfaces (e.g. in the switch fabric and /or ingress interface). Ambe et al. do not teach or fairly suggest this division of traffic forwarding and replication functionality, nor any advantages obtained thereby. None of the other known prior art provides the missing teaching.

In light of the foregoing, it is respectfully submitted that the presently claimed invention is clearly distinguishable over the teaching of the cited references, taken alone or in any combination. Thus, it is believed that the present application is in condition for allowance, and early action in that respect is courteously solicited.

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If any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this response, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 19-5113.

Respectfully submitted,



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